

# Discussion on MTG Toolbox

# MTG Toolbox

## Quick Overview

- Reaching beyond the research community
- Making our work accessible and understandable to non-experts by lowering technical barriers
- With the aim to:
  - Involve those most impacted by and/or those most relevant to the research
  - Invite more diverse collaborations beyond industry and external researchers

**(TL;DR) A platform for sharing tools with non-experts in an easily accessible manner**

# Plan for the meeting

Discuss and brainstorm

- All of us have different networks, and have quite different perspectives on **what and how our research should be shared beyond academic circles**
- **What's missing** from the website in it's current state
- Share some **recommendations / resources**

# What tools should we aim to share?

Sharing **tools** with non-expert users in an easily accessible manner

- Any tool aimed at creative applications of music technology
- Does the tool need to be generative and/or AI-based?
  - We shouldn't focus the platform on these applications.
- Many of the topics we work on have the potential for broad creative applications — it's often just a matter of reimagining how they can be used in creative contexts.

# Who should we design the tools for?

Sharing tools with **non-expert users** in an easily accessible manner

- Expertise here only refers to expertise in our own research areas
- We can (and sometimes should) assume that users will be experts in their own fields
- So, we shouldn't aim to develop tools that suit everyone!
- But, we should develop the tools in a way that :
  - Accessing them doesn't require technical knowledge of our research process and involved technologies
  - Ideally the tool is designed according to the habits/requirements of the target user group

# How should we improve accessibility?

Sharing tools with non-expert users in an **easily accessible manner**

- Perhaps this is quite dependant on the target users and the target application
- That said, maybe regardless of the tool, we should adhere to some common practices
  - Deployment in a relevant and accessible manner
  - Proper documentation
    - Consider user's domain knowledge, and prepare documentation accordingly
    - (Ideally) Avoid engineering explanations. That said, try to convey the research method in non-technical terms
  - Demos
    - Show basic use cases
    - If possible, propose (to encourage) alternative ways of using the tool
  - Support
    - Provide proper channels for receiving feedback and providing support

# Accessible Deployment

- **Standalone Apps**
- **VST plugins**
  - HARP (<https://par.nsf.gov/servlets/purl/10543349>)
  - NeuralMidiFx (<https://neuralmidifx.github.io/>)
- **Puredata:**
  - Plugdata for easy DAW integration (also builtin tools for exporting certain patches into VST plugins)
  - nn~ for deployment of torch models
- **Max:**
  - M4L for easy integration in Ableton
  - RNBO for creating VST plugins or Max External from max patches (<https://rnbo.cycling74.com/>)
  - nn~ for deployment of torch models
- **VCV Rack Modules**
- **Add-ons** for Audacity, Sibelius, Reaper, ...
  - ReaScript for custom Reaper Scripts
  - DL Tools for Audacity (<https://interactiveaudiolab.github.io/project/audacity.html>)

# How to decide on the deployment environment?

- Consider:
  - Target users' workflows
  - What you can afford
- Find a balance and deploy accordingly
- Ideally (if possible and affordable), multi-platform without requiring specialized hardware.
- In any case, do your best make the installation as easy, streamlined and familiar as possible



# Who maintains the shared tools?

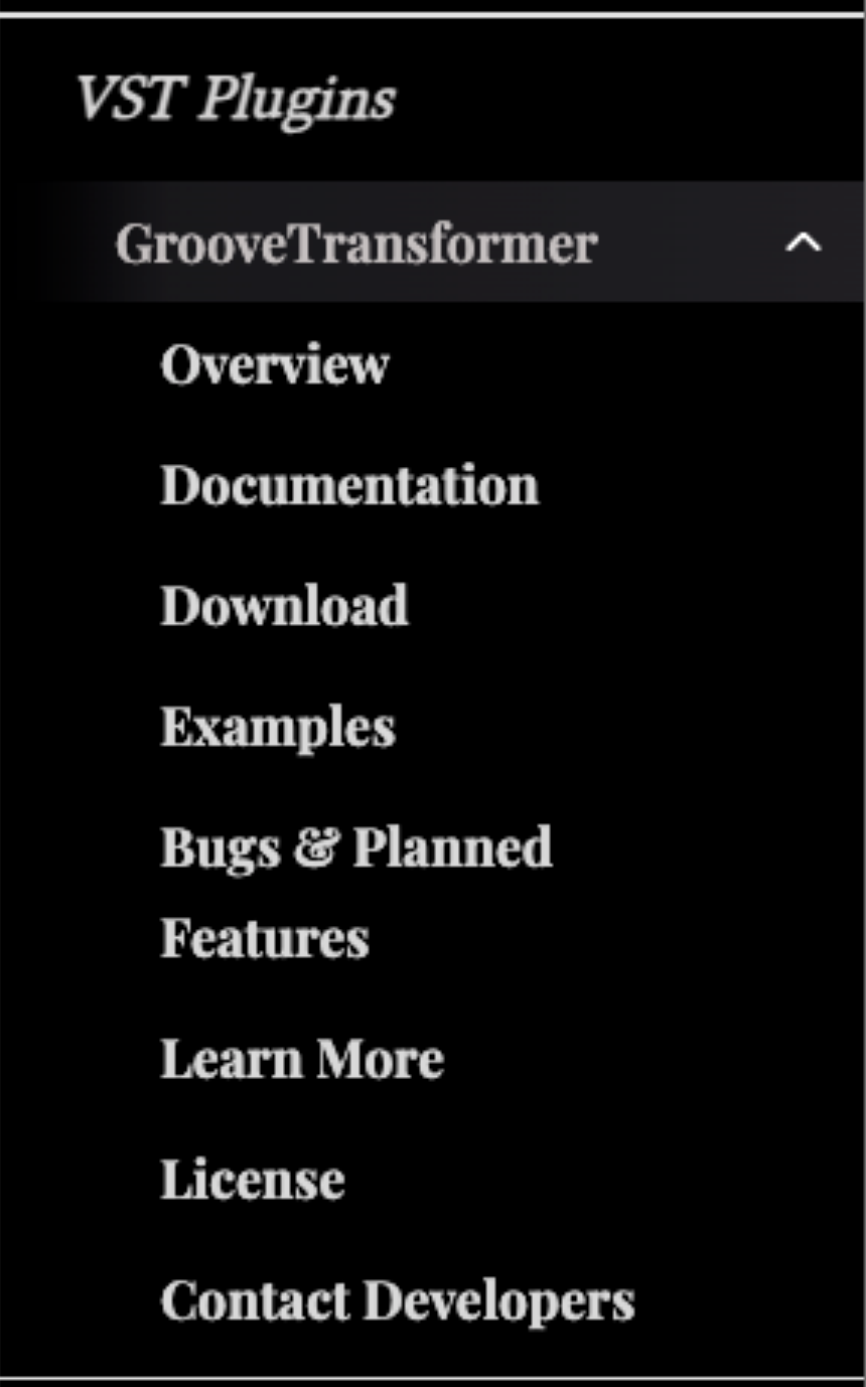
- The main developers of the tool
  - in whatever shape or form they prefer, and
  - of course to the extent they can afford to do so
- If the project is open-source, hopefully external collaborators would be encouraged to help with maintenance as well
- I can also help with development (deployment), content preparation and maintenance of projects

Sharing Projects Post-Deployment

# Content for Website

What to share?

- **Overview**
- **Documentation**
- **Download**
- **Examples (Demos)**
- Bugs & Features
- Learn More
- **License**
- **Contact Developers**



**Bold:** Possible Must-haves (?)

# Content for Website

## Overview

- Explain the **concept** behind the tool
- Explain most important aspects / usages of the tool
- Explain the **technical aspects** of the tool **in non-technical terms**
- Use text / visuals / videos, whichever you prefer and are more comfortable with

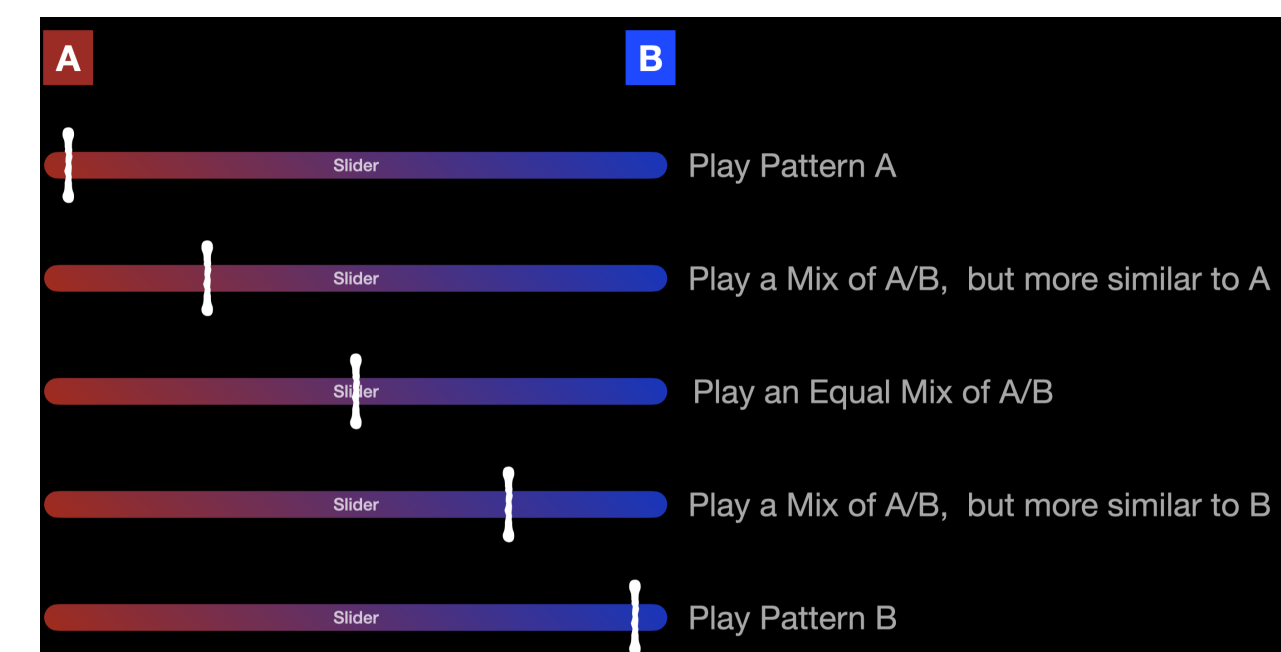
### Overview

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#### TABLE OF CONTENTS

- 1 [What is the GrooveTransformer?](#)
- 2 [Story Behind the GrooveTransformer](#)
- 3 [How does it work?](#)
  - a [Generative Model](#)
  - b [Exploiting Model Capabilities](#)
    - a [Sequencing between Two Patterns](#)
    - b [Reacting to a Live Rhythmic Source](#)
    - c [Where does the Live Rhythmic Source come from?](#)
    - d [Manual or Automatic Navigation](#)
    - e [Manipulating the Generations](#)
- 4 [Disclaimer](#)



# Content for Website

## Documentation

- Installation / Setup Guide
- Usage Manual
- Be as detailed and thorough as possible
- Use terminologies familiar to the target group

## Documentation

### A detailed documentation of GrooveTransformer VST

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#### TABLE OF CONTENTS

- 1 **Setup in DAW**
- 2 **Manual (Version 0.0.1)**
  - a **Feeding a Live Rhythm to GrooveTransformer**
  - b **Manipulating the Detected Rhythmic Events**
  - c **Selecting A/B Patterns**
  - d **Navigation of the Triangular Rhythm Space**
  - e **Manipulation of Generations Using Controls**
  - f **Trying Model Variants**

# Content for Website

## Download

- Provide Links to download the tool
- Specify if specific requirements is needed (platform, ...)
- You can host the tool anywhere, and just provide links here
- If you can, provide access to source code!

### Download

VST Installation Files for GrooveTransformer

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TABLE OF CONTENTS

- 1 [Version 0.0.1](#)
- 2 [Plugin Source Code](#)

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### Version 0.0.1

See the following tables for the download links for the GrooveTransformer VST plugin.

|               |                          |
|---------------|--------------------------|
| -             | Download Links           |
| Windows       | <a href="#">Download</a> |
| MacOS (ARM)   | <a href="#">Download</a> |
| MacOS (Intel) | <a href="#">Download</a> |
| Linux         | <a href="#">Download</a> |

### Plugin Source Code

The plugin source code can be found [here](#).

The plugin was developed using [NeuralMidiFx](#), a wrapper we developed for streamlining the deployment of generative models within VST plugins.

# Content for Website

## Download

- Where to host?
  - Github Releases
  - <https://patchstorage.com/>
  - <https://maxforlive.com/library/>
  - <https://gumroad.com/>



# Content for Website

## Examples / Demos

- Prepare audio / video demos
- Cover the basic usages
- If possible, provide more advanced (alternative) uses that users may not be aware of

## Examples

### Where and how to use the GrooveTransformer VST

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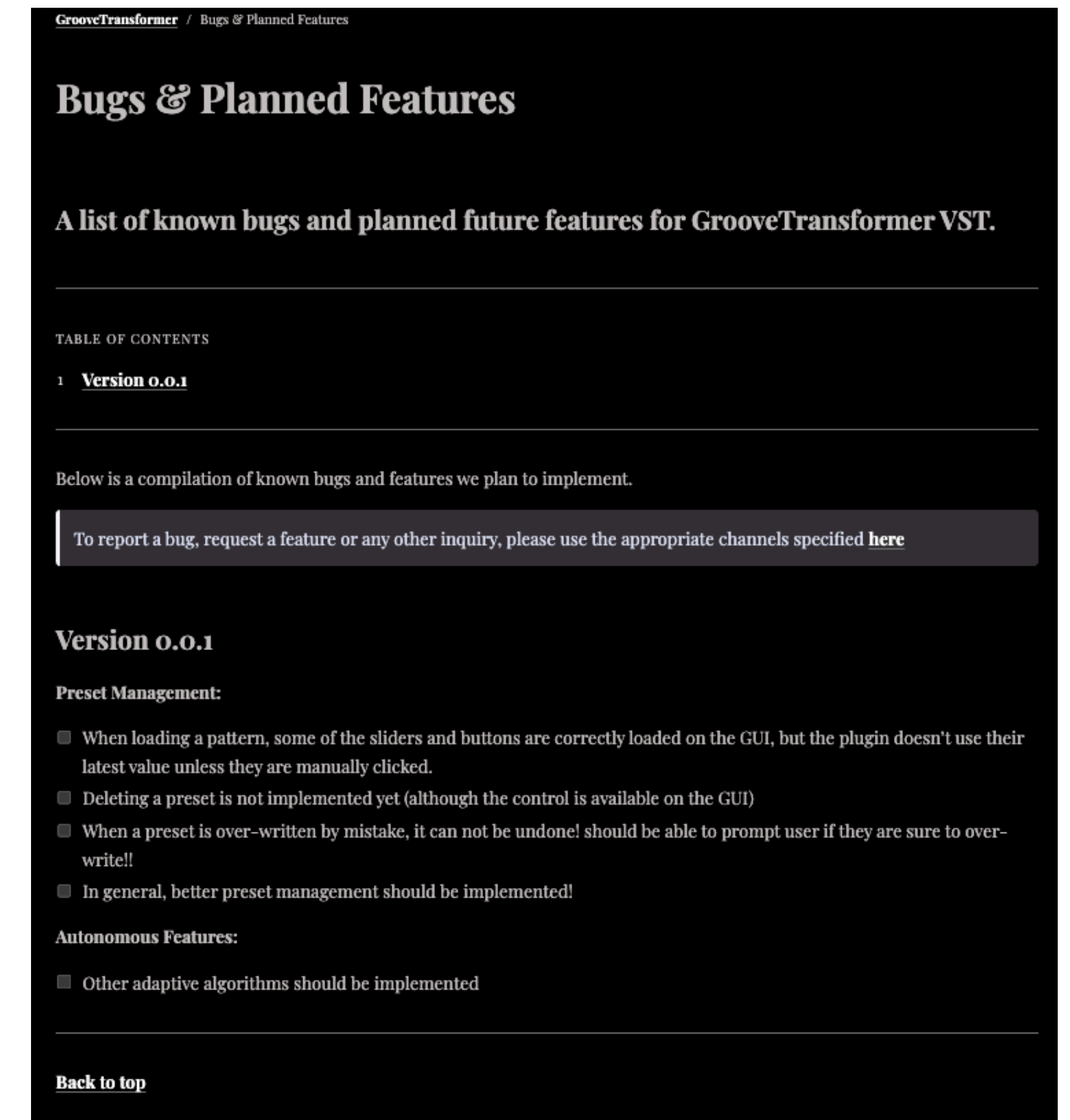
- 1 **GrooveTransformer as a Sequencer**
  - a **Basic Operation Using A/B Patterns**
  - b **Groove Input Along with A/B Patterns**
- 2 **GrooveTransformer as a Pseudo-Autonomous Rhythm Generator**
- 3 **Advanced Use Cases: Going beyond Generating Percussive Sequences**
  - a **Parameter Sequencing using Velocity of Generations**
  - b **Rhythmic Manipulation of Audio**
  - c **Pitch Sequencing**



# Content for Website

## Bugs & Planned Features

- Track identified issues to be fixed
- Specify if a new feature is to be implemented in future
- Do we need this?
  - Does it improve transparency?
  - Does it help with emphasizing that projects are maintained by small teams hence user's shouldn't expect tools to be on par with commercial products?
- Use this page for tracking bugs and feature plans. For reporting bugs, refer users to "Contact Developers" page



# Content for Website

## Learn More

- Provide additional info
  - Technical documents (papers / source code / ... )
  - Showcases
- Any other resource you want to share / promote

## Learn More

### Technical Information about the GrooveTransformer

#### TABLE OF CONTENTS

- 1 [Technical Details](#)
- 2 [Showcases](#)

## Technical Details

Some technical aspects of the GrooveTransformer have already been published and some other are under development.

Below is a paper that was presented at the [NIME 2025 conference](#):

Haki, B., Evans, N., & Jordà, S. (2024). GrooveTransformer: A Generative Drum Sequencer Eurorack Module.

#### NOTE

This paper is on a Eurorack module that was made based on the plugin shared here. The technical aspects are not the same.

## Showcases

Over the past year we've had two performances using the system:

- 1 [Raül Refree + Groove Transformer @ CCCB, Barcelona](#)
- 2 [Organic Series at Palau Güell: Raül Refree](#)

Moreover, we also presented the GrooveTransformer at [Sonar+D \(2023\)](#) and [+RAIN \(2023\)](#) festivals.

# Content for Website

## License

### License

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# Content for Website

## Contact Developers

- Mention the people behind the project
- Acknowledge Fundings / External Collaborators
- Provide channels for communication

### Contact Developers

**Contact the developers for support, feedback, or feature requests.**

#### TABLE OF CONTENTS

- 1 [Developers](#)
- 2 [Acknowledgements](#)
- 3 [Support, Bug Reports, and Feature Requests](#)
- 4 [Feedback, and Direct Contact](#)
- 5 [Collaborations](#)

# Content for Website

## Contact Developers

- You decide how you want to receive communications?!
  - Is Github issues a good place?
  - If you're ok with direct contact, provide email
- Do we need a specific forum perhaps?

### **Support, Bug Reports, and Feature Requests**

Please use the [GitHub Issues](#) page.

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### **Feedback, and Direct Contact**

If you prefer to contact us directly, please contact [Behzad Haki](#).

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### **Collaborations**

If you are interested in collaborating with us, please contact any of the developers above.

# Content for Website

What should be mandatory?

- **Overview**
- **Documentation**
- **Download**
- **Examples (Demos)**
- Bugs & Features
- Learn More
- **License**
- **Contact Developers**

*VST Plugins*

GrooveTransformer ^

**Overview**

**Documentation**

**Download**

**Examples**

**Bugs & Planned**

**Features**

**Learn More**

**License**

**Contact Developers**



# How should we organize the tools on the platform?

- By task? (e.g. synthesis, effect, ...)
- By Modality (e.g. Audio/Midi/Text-to-, ...)
- By Deployment Type (e.g. VSTs, Max, Puredata, Webpage, ...) —> This is the current approach
- Or should we simply organize by the order in which tools were added to the platform?